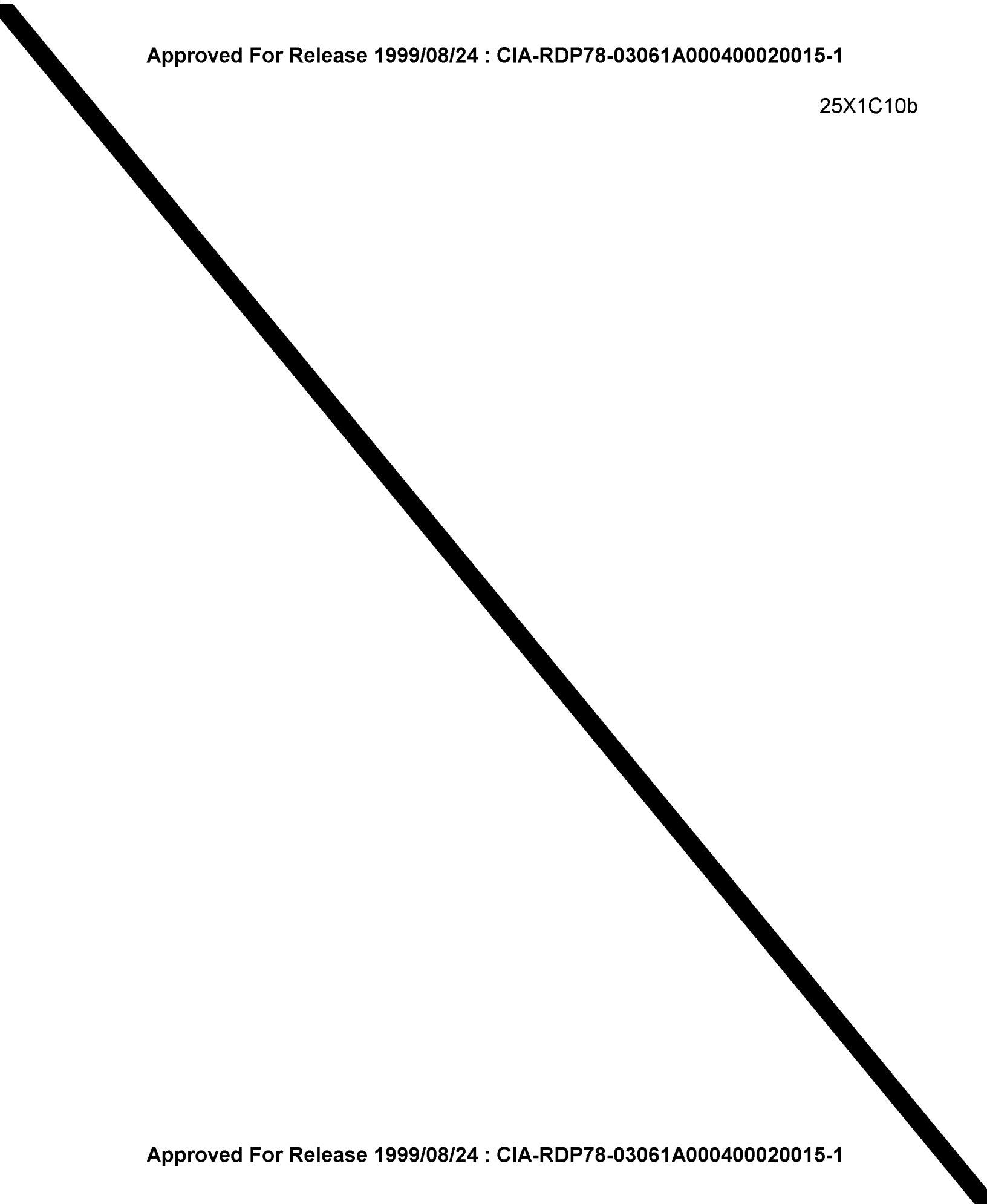
25X1C10b



February 1969

THE FATE OF CHINA'S INTELLECTUAL COMMUNITY DURING THE CULTURAL REVOLUTION

Early in June 1966 the Principal of the renowned Peking University was attacked by what was soon to become an all too familiar weapon -- the wallposter. Similar attacks spread like brushfire to dozens of other respected institutions of learning throughout China and, almost as simply as that, the Cultural Revolution had been launched. By August of 1966, the Revolution and its adolescent apostles, the ubiquitous Red Guards, had become an unpleasant fact of life for many thousands of China's teachers, scholars, artists and all those comprising that segment of the population known as the intellectual community. But wallposter attacks, initially accompanied by verbal denunciations, demonstrations, speeches and ridicule of the victims, were only prelude and destruction of property, and armed clashes, (and, in a few cases, deaths and suicides) became the order of the day. A similar scenario was being written at the same time by extremist elements in factories and within Communist Party organizations, but that is another story, in many ways quite removed from that of the intellectuals. The methods applied against all the victims, however, bore a depressing resemblance to one another.

The Cultural Revolution might have died after the initial impulse had ebbed but for two events. Chairman Mao Tse-tung (presumably to prove he was still able to command), after (allegedly) taking his famous swim across the Yangtze, returned to Peking where he wrote his own poster called "Bombard the Headquarters," praising the Red Guards and in effect putting himself at their head as they began to flood into Peking. Then, on 8 August, the Central Committee of the CCP produced a document (undoubtedly at Mao's behest -- probably even drafted by him) giving Party blessing to Red Guard actions in China's schools (as well as to extremist actions in China's factories). Thus, the Cultural Revolution was assured a future, for at least as long as it took to accomplish its purpose: cleansing the Party of "rightist" elements, which, of course, is translatable into moderates.

The intellectuals were certainly the most dramatic victims of the Revolution although this was not necessarily the initial intention of Mao and the Central Committee. Certainly Mao is aware of the qualms traditionally suffered by the intellectual in being obliged to conform; surely he is also aware that many intellectuals hold Party membership as a matter of highly cynical expediency. Mao did, however, make concessions for one segment of the intellectual community in the Central Committee's document on the Cultural Revolution.* Not surprisingly, that segment was the scientific community; China, after all, had her nuclear weapons program underway.

---

*"Decision of the Central Committee of the Chinese Communist Party Concerning the Great Proletarian Cultural Revolution." Also known as the "Sixteen Points of August 1966."

"As regards scientists, technicians and ordinary members of working staffs, as long as they are patriotic, work energetically, are not against the Party and socialism, and maintain no illicit relations with any foreign country ... special care should be taken of these scientists and scientific and technical personnel who have made contributions. Efforts should be made to help them gradually transform their world outlook and their style of work."

Scientists

Despite Mao's effort to insulate China's scientific community from the turmoil of the Revolution, the violence generated in the course of his purges inevitably disrupted regions such as Sinkiang, where Chinese nuclear, missile and other defense installations are centered. Mao's special provisions for the scientific segment of the intellectual community apparently did not win over as many adherents as he had hoped, for quite recently five scientists, including three associated with China's nuclear program, have been arrested on charges of treason and spying for the Soviet Union. The most prominent of these, Chien San-chiang, was the head of China's Atomic Energy Institute. Now in his late fifties, Chien studied in Paris under Communist physicist Frederic Joliot-Curie, winning the physics award of the French Academy of Science for his work on gamma and alpha rays and the tri-partition of nuclear fission of uranium. The other two arrested scientists had, like a number of China's senior scientists, been trained abroad. Wang Kan-chang, charged with "relying too heavily on foreign textbooks and conventions," had studied at the University of California before his apointment as Deputy Director of China's Institute of Atomic Energy. Wang is a nuclear physicist specializing in the fission process.

Not only has the Cultural Revolution done damage to China's nuclear installations, caused dissension among her leaders on scientific and defense policy and the arrest and disgrace of some of her leading scientists, but the Revolution has also dammed up the international exchange of scientific information. The flow of scientific publications from China has dried up almost completely: not one Chinese scientific journal has been sent to Great Britain, for instance, since October 1966. Internally the situation is almost as serious; the number of publications listed for internal subscription in China fell from 650 in 1966 to 58 in 1968. This cutoff, plus the curtailment of visitors to China, has reduced meaningful assessment of the role of science and the scientific worker (at any level) in China today to semi-educated guesswork. From what can be observed and deduced, however, and even taking into account the Chinese hydrogem bomb test on 27 December 1968, it is apparent that Mao's Cultural Revolution has done considerable damage to scientific training and research programs.

Scholars, Teachers, Students

After the opening gun of the Cultural Revolution was fired at the head of Peking University, hundreds of scholars and teachers met the same fate: ridicule, scorn, physical indignities, loss of job and standing in the community and in some extreme cases even the loss of life. Now, a national "do-it-yourself" campaign has been launched in China to revise the entire educational curriculum, a campaign so alarming in its implications for the future of education that China's harried and despairing scholars and teachers must view it as the end of learning. The aim of the campaign is strictly ideological and the revamped curriculum will overwhelmingly consist of study of the thoughts of Mao. The authority of the headmaster over the school and of the teacher over his class has been abolished completely. Entrance examinations, grades, traditional rewards and punishments and final examinations have been swept aside and the workers and peasants are now in charge of education. Peking apparently will be content to leave the education of the nation's young almost entirely in these hands, and has gone so far as to abolish or severely limit allocations of state funds to primary schools all over China.

Looking beyond the primary schools, there is apparently no intention on the part of the regime to resume meaningful higher education in the near future. Canton's technical colleges are not to reopen until the fall of 1969 at the earliest; a Shanghai university specializing in architecture and civil engineering has already had its courses cut from five to three years and courses at Tung-chi University in Shanghai have been reduced from four to three years. In addition, all curricula in upper schools are being revised and the subjects taught are being more closely geared to production requirements. Ideological outlook is to play a very large part in students' promotions from one educational level to another.

The regime's two most recent dicta with regard to education offer little promise of improvement in educational standards. Particularly disheartening is the first of these which decrees the dispersal of 500,000 college level youth in Kwangtung to the countryside for an unspecified time in order to engage in "agricultural pursuits." The peasants -- who begrudge these usually unwilling recruits food and shelter and are uniformly intolerant of their inexperience -- can offer little to replace the loss of formal education. The possibility of inculcating a minimum of discipline in the students in the present circumstance is almost nonexistent. Also disheartening is a second regime dictum that provides for the immediate "graduation" of older students. These older students tended to be leaders of the Red Guard movement and the great majority of them have had no schooling in more than two years. It scarcely requires a scholar to predict how this cavalier approach to academic disciplines is going to affect China's young and the quality of her once-proud educational system.

Doctors, composers, artists

Medical facilities in China, already below international standards, deteriorated during the Cultural Revolution and the training and standing of doctors was lowered appreciably. Like the veriest criminals, doctors

and nurses were dragged out of their hospitals, laboratories, clinics and classes by the Red Guards and forced to do manual work. Some have been sent to rural areas where they spend half their time doing manual labor. The Chinese authorities are encouraging medical personnel to use Mao's "Thought" in lieu of drugs and equipment, and presumably medical textbooks, with what ludicrous and sometimes appalling results for the patients as can scarcely be imagined.

The same frighteningly familiar treatment accorded the scholars and the teachers was meted out to composers and artists who failed to measure up to the standards of the regime as interpreted by the Red Guards. The isolation of men of talent is inevitable in today's China for it is inescapable in the arts that the dominance of politics will produce philistinism, a dreary sameness of tone and color and thought and a smothering lack of imagination. Ma Sitson's story is a commentary on what has happened to many of China's talented artists, musicans, composers. Himself a composer of international rank and head of Peking's Central Music Academy, Ma along with Academy professors and administrators, was humiliated, harassed, beaten and threatened in the name of the Cultural Revolution. It was only because he managed to escape China in the winter of 1967 and flee to the United States that the world outside learned what had happened to men like Ma and his fellow artists who included pianist Liu Shih-kun, runner-up to Van Cliburn in the 1958 Moscow competitions.

The Communist Party and the Cultural Revolution

The Cultural Revolution, which has done such damage to China's intellectuals, was actually fashioned by Mao to excise "Party persons in authority" and to give youth the vicarious experience of a synthetic "revolution." Perhaps this is the reason he was so much more adept at manipulating party personnel under cover of the Cultural Revolution than he was in manipulating the intellectual community. In any case, the Chairman cannily managed to smoke out his adversaries in the Central Committe with very little fanfare, severed their lines of support without destroying the Central Committee and is now apparently much readier to face the problems which China's long-delayed Party Congress may bring. The Congress' first task will be to name a new Central Committee since less than a third of the presently listed 172 full and alternate members are still active. It requires little imagination to guess wher- the loyalties of the survivors lie.

The new membership named in this Congress will undoubtedly be dominated by the military since the army has proved loyal to Mao, is trusted by him and has been extensively used by him as a checkrein on the Red Guards and on the older extremists during the Cultural Revolution. In this context, it seems highly appropriate that the New China News Agency announcement of China's December 1968 hydrogen bomb explosion described the test as "a significant gift to the forthcoming 9th National Congress of the (Communist) Party."

Attachments

Look, (Hong Kong Chinese-language fortnightly magazine), 16 November 1968, "Can Workers Lead the Intellectuals?" by Chi'i Ming.

London Times, 3 January 1969, "China's Youth 'Volunteer' for Rural Life."

Los Angeles Times, 19 December 1968, "Chinese Now Exalting Ignorance and Illiteracy," by Robert Elegant.

Sing Tau Man Pao, (Hong Kong daily), 19 September 1968, "Where Can A Chinese Scientist Go?" by Cha Ling, from Chinese nuclear physicist Li Ming-ching.

London Times, 10 December 1968, "Chinese Education Reshaped."

Far Eastern Economic Review, 16 May 1968, "Science for the Masses?"

New Statesman, 18 October 1968, "Mao's Second Take-over," by Roderick MacFarquhar.

Excerpts from Chinese mainland media (including NCNA and the CCP organ, *People's Daily*) revealing regime treatment of scientists and doctors and the status of medicine in China as a result of the Cultural Revolution.

Additional References;

International Affairs, London, April 1968, "The Cultural Revolution in China."

China Quarterly, October-December 1968, "The Cultural Revolution and the Party."

Life Magazine, two articles on the story told by Chinese composer Ma Sitson following his escape from China in the winter of 1967, 2 June and 14 July 1967 issues.

LONDON TIMES
3 January 1969

China's youth 'volunteer' for rural life

By RICHARD HARRIS

Chairman Mao has now thrown his weight behind the campaign to persuade the educated youth of China to leave the cities and settle for a life in the countryside. The usual brief message from China's leader has been splashed over the newspapers for the past week as the fervour of volunteering is brought to a peak. Civilians and soldiers in their hundreds of millions, according to Peking radio, are all helping to whip up enthusiasm.

The "intellectuals" who are going are university graduates, senior high school graduates and sometimes 14 to 15-year-old junior school leavers, all soldiers of Chairman Mao who have hitherto provided the backbone of the Red Guard movement. They are part of the vast internal migration which the cultural revolution has brought to a peak previously unknown in China. When the Red Guards were called up in 1966, 11 million of them made their way to organized demonstrations in Peking.

As many more went from one part of China to another "making revolution" against revisionist leaders in the Chinese Communist Party. At the same time there were the evacuees of the previous decade who had found rural life too much for them and who, under the excuse of "making revolution", sneaked back to their city homes. These youths too are being rounded up for a return to the village.

From the figures quoted in the press, sometimes for a provincial capital, sometimes for the towns in a district, or for a whole province, a rough figure of 10 million may be arrived at. By the time the campaign ends something like 15 million may have been shifted from town to country.

The campaign sets out to solve several problems. One is unemployment in the cities. In a country where parents and children are equally eager and serious about education there are simply not enough jobs for the educated, especially of the mandarin status, which survives in China as an ideal even if this now takes the form of the party official. It has, of course, been one of Chairman Mao's chief aims in the cultural revolution to demolish this status in fact and in imagination. He insists that all men should dirty their hands, that the barrier between town and country must be bridged, and that the sharpest of all class distinctions in Chinese society—between the educated and the uneducated, between the manual worker and the brain worker—must at last be obliterated.

Another reason for the great march outwards from the cities follows on Chairman Mao's discovery last year that the young were not exactly the incorruptible revolutionaries he had hoped for. They had to be dropped in favour of the workers who were organized into teams to take over all institutions of higher education and knock into them the sense that can come only from experience at a factory bench. Much better, therefore, to move out from the cities unemployed and disaffected revolutionaries who are now called upon to serve the revolution and their leader by settling for a life of political obscurity and considerable hardship.

Perhaps another class of evacuees is better off. These are the educated youths posted as settlers in remote areas, such as the climatically unpleasant Heilungkiang in the far north, or the culturally strange grasslands of Inner Mongolia, or the rough pioneering wastes of Sinkiang.

One obvious use for the "intellectuals" is to put them to the task of education. A timely reform being introduced all over China transfers the responsibility for all but higher education from the Government down to the commune. The midway unit of the production brigade—lying between the village level production team and the 50 or more villages of the commune itself—is being given more responsibility and may have the job of running junior schools.

Students are not the only class being culled from the cities. As part of the party purge sifting pure Maoists from the impure there has been a thinning out of lower level cadres. The same applies to inflated bureaucracies in national enterprises. The Huhehot (Inner Mongolia) railway bureau staff, for example, was cut from 841 to 93. Such cadres find themselves jobless and are in no position to turn down the horny-handed life of a peasant.

Finally, there are the educated with skills who are unevenly distributed, most commonly medical workers. Here, too, the shift is going on by the same combination of persuasion and coercion. Kiangsi province reports 11,000 medical workers shifted out to villages from towns.

Articles in the press castigate students who "stubbornly place their personal interests above those of the state". By contrast the Chinese news media are now filled with pictures of happy girls at home in their new villages, helping the peasants and learning from them.

When one reads of 2,000 intellectuals from Peking and Tientsin setting out for a new life with the herdsmen in the grasslands of Inner Mongolia one must imagine as best one can how change is being imposed on Chinese society.

LONDON TIMES
10 December 1968

Chinese education reshaped

Hongkong, Dec. 9.—A national "do-it-yourself" campaign has been launched in China for a complete reform of the educational system under the direction of peasants and workers.

The movement has been gathering impetus since last spring but received national approval on November 13 when the Peking People's Daily officially suggested that all state-run primary schools in the countryside be put under the peasant production brigades and run by them. This was followed by similar directives for factories to take over the management of primary schools in the towns.

The primary aim of the campaign is ideological and the main emphasis is on the study of the thoughts of Mao Tse-tung. The People's Daily also emphasized the need to cut down Government expenditure on school subsidies, the maintenance of school buildings and teachers' wages.

A principal recommendation is that teachers should no longer be paid by the Government but by the production brigades on the basis of work-points. Under this scheme, a primary school teacher would get roughly the same work points as a labourer. Allocations of state funds for schools are to be abolished or severely limited.

Some of the proposals elaborated in a flood of newspaper articles and radio broadcasts over the past six months sound very similar to the ideas of educational reform at present in vogue in France and other European countries.

The authority of the headmaster over the school and of the teacher over his class is abolished. Entrance examinations, marks, traditional rewards and punishments and school-leaving certificates are swept into limbo. There is no question of student power, however. In fact, the workers and peasants now in charge of education are strongly prejudiced against student intellectuals.

An article in the theoretical journal Red Flag last week gave the impressions of a workers' propaganda team sent to the Shanghai Foreign Languages Institute. The workers reported that their first impression on entering the institute was one of dislike.

"As far as daily life went, the bourgeois intellectuals were always talking about food and clothes. When it came to study, they talked grandiloquently and with no relation to reality. They applied Marxism to others but liberalism to themselves. And they were free and asy about organizational discipline and did as they pleased. The older workers shook their heads when they saw this and said: 'We dislike it'."

Some observers in Hongkong regard the present educational reform in China as a strongly conservative movement with overtones of decentralization since Peking appears to be content to leave the whole business of primary education to local authorities. The mood of the reforms is authoritarian and the present trend seems to be a reaction against the undisciplined excesses of the Red Guards at the height of the cultural revolution in 1967.

The curriculum in the revamped schools begins and ends with the thoughts of Mao Tse-tung. A report carried by the New China news agency describing the daily routine of a school in Heilungkiang province said: "In the past, the first words the students said after entering the classroom were: Good morning teacher. Now their first words are: We wish Chairman Mao a long life.

"In the past, students saluted their teacher when class began. Now they salute Chairman Mao. In the past, the first lesson each day was language or mathematics. Now it is the fixed daily reading of Chairman Mao's work.

"In the past, it was the bookworms who got high marks and who were considered good students. Now it is those who study and apply Mao Tse-Tung's thoughts in a living way who are considered good students."—Agence France Presse.

LOS ANGELES TIMES
19 December 1968

Chinese Now Exalting Ignorance and Illiteracy

'Wisdom of Age' Replaces That of Youth Via Worker-Peasant Propaganda Teams

BY ROBERT S. ELEGANT
Times Staff Writer

HONG KONG—The seasoned wisdom of age has replaced the hot-house wisdom of youth as the guiding force of China's declining Great Proletarian Cultural Revolution, but the innate superiority of ignorance is still exalted above despised book-learning.

It all began with the adolescent Red Guards, who were ordered to "make a new proletarian world by destroying the entire old civilization."

It is now ending with workers and peasants in Thought of Mao Tse tung propaganda teams—the older their members the better—nominally taking control of institutions as divergent as kindergartens and technical universities, banks and electrical machinery factories, radio stations and railroads, newspapers and shipyards.

Share Three Traits

Three common traits are shared by the youthful Red Guards, now entering enforced eclipse, and the workers' propaganda teams, now in ostensible ascendancy. They both:

—Are willfully ignorant and contemptuous of those formally educated, whether in engineering, administration, literature, music or any other skill.

—Find such schooling unnecessary because they are "armed with the invincible Thought of Mao Tse-tung."

—Are controlled by the People's Liberation Army. They are virtual puppets of the generals, who first took China apart using the Red Guards and are now trying to put the pieces together using the vigilantes of the workers' propaganda teams.

Illiteracy Valued

Illiteracy, for example, has now become a positive virtue, presumably because it demonstrates freedom from contamination by "bourgeois thought."

Preferred as members of the propaganda teams, particularly in schools, are aged workers who have never learned the complex Chinese ideographs.

Some of those workers, according to Communist publications, were at first reluctant to take over the direction of schools. But they were convinced that their native folkwisdom could make a greater contribution to the education of the young than could the corrupt knowledge of professional teachers.

The Peking Peoples Daily, the chief organ of the regime, recounts with great pride the accomplishments of Liu Kuei-ying, 50, who was assigned to the propaganda team ordered to purify a mining academy.

Relies Upon Mao

"They asked her: 'You are old and you are quite illiterate. How can you possibly run a university?'

"She answered: 'Of course I can.' With the backing of Mao Tse-tung, anything can be attained! Under the white terror of the capitalist reactionaries, Mao Tse-tung gave me heart to resist all the evil elements. Now Chairman Mao calls upon the workers to back up the cultural revolution. With a red soul utterly loyal to Chairman Mao, I can run a university very well, indeed!'"

She ran the mining academy so well that the students, some of whom had strayed from the paths of Maoist righteousness, all turned spontaneously to her for advice and respectfully called her Auntie Liu.

Finally Speaks Up

Such tales abound. Illiterates run universities, and washerwomen take over the direction of major hospitals, as did Chieh Juichu, whose given name, incidentally, has a fine, old feudal ring, meaning "auspicious chrysanthemum."

Known as the "political mute" becaus "she dared not utter a word or compose a big-character poster (previously, the universally encouraged means of protest) for fear of losing her job," washerwoman Chieh finally spoke up when encouraged by the propaganda team at the municipal hospital of Shihchiachuang, a major city near Peking. Her revelations of "capitalist-roading" and dereliction of duty among the professional staff, the despised intellectuals, has now worked a proletarian revolution in the hospital.

Literally millions of men and women of propaganda teams, "guided by the Peoples Liberation Army," have invaded every major institution in China —ostensibly to "correct errors in ideological orientation and carry the cultural revolution through to the end." They are, presumably, qualified for that arduous task by their pure "proletarian consciousness" and by their instinctive comprehension of the canonical Thought of Mao Tse-tung.

The real point, however, is by no means what it appears.

Put Down Excesses

The chief function of the workers propaganda teams is to suppress the excesses of the cultural revolution—in the name of Chairman Mao of the Communist Party, but under the orders of the hard-headed local generals.

The local authorities' purpose is to put down the disorder initiated by the Red Guards, which ultimately burgeoned into full-scale armed conflict between contending factions. The workers teams are their instruments.

The insurgent Red Guard adolescents, who were told only a year or two ago that they were the white hope of the future, are understandably resentful. They naturally resist the bumbling efforts of the workers teams to dictate their thoughts and deeds—despite the open threat of the uniformed soldiers who stand behind the worker teams.

Old Slogan Is Out

In Honan province, for example, the local radio station revealed, ". . . An evil wind has been whipped up . . . The numerous mosquito papers—some very influential, some less so—throughout the province have come into action . . . Scholars, who are usually genteel and gracious, cannot take it any longer. They rise up and play it rough . . . The evil wind is by no means small. It can still raise waves . . . Those warriors opposing revival of the old have become swollen-headed . . . their spearheads are directed at the workers Thought of Mao Tse-tung Propaganda teams . . ."

It is ironic that the old slogan, "oppose the restoration of the old," is now anathema — while the creation of "revolutionary alliances" is the aim of the teams. The chief purpose of the cultural revolution was to "destroy the old . . . and make constant revolution through ceaseless class struggle." It was not the reconciliation of feuding elements, but the encouragement of "struggle."

But reconciliation is today's goal, and, according to Changhsha Radio in Hunan province, it occasionally works. The radio said:

"A chieftain of a mass organization (i.e., a Red Guard fighting faction) had committed most serious mistakes because he was so highly deluded. Before the propaganda team arrived, he had left school. The team visited him at home, and, under the urging of his parents, he returned to school."

All this, of course, makes no sense whatsoever in the old Maoist context. Not only was "struggle" to be incited, but the traditional authority of parents [illegible] was to be broken.

Despite the efforts of both worker vigilantes and the Peoples Liberation Army, true harmony is still as distant as is a consistent pattern among China's 29 major administrative areas.

Two things, however, remain constant.

Despite all exhortations, classes have still not been resumed, except in a few scattered localities. Those students, now the majority, who simply want to get back to their studies are totally frustrated.

Traditional class prejudice persists. Students and intellectuals look down their noses at rough-mannered, ill-educated workers who are, half against their will, "taking over direction of the struggle." Waiters in restaurants drag their feet when attending poorly dressed workers — or refuse to serve them.

The mess will, of course, all be cleared up in time—or so the Chinese press insists.

"Militarized construction" of education and the economy is the answer of the army, which believes that country requires military control and training. To that end, students and faculties, as well as workmen and administrators, have already been organized into "squads, sections and platoons" under soldiers' orders.

The army was, in the beginning to "become a great school of the Thought of Mao Tse-tung." It now appears that, behind the facade of Workers Propaganda Teams, the entire country is to become a vast military school.

FAR EASTERN ECONOMIC REVIEW
16 May 1968

Science for the Masses?

By C. M. C. Oldham

TECHNOLOGY IN CHINA: The struggle between the "two lines" in China today has invaded the field of science. While the Maoists advocate a grass-roots emphasis upon technology for the masses, the opposition favours more attention to advanced research. In this article, originally read at last month's Seminar on Contemporary China at the University of Guelph, Ontario, Professor Oldham outlines the violence of the struggle between the two sides and argues that the future of Chinese science is inextricably linked to the future of the Cultural Revolution. If the Maoist view prevails, this may be a loss to world science, but it will be a gain for China's own development.

WHEN THE PEOPLE'S REPUBLIC of China was established in 1949 the new leaders inherited a scientific establishment which, although badly decimated by the wars, provided a solid foundation on which the new Government could build quickly. The new Government appreciated that science and technology were indispensable tools for creating the new type of China which it envisaged. Several policy statements made it very clear that science and technology were to play an extremely important part in shaping China's future. One of the first tasks of the new Government was to expand educational facilities at all levels and to concentrate efforts on the production of scientists, engineers and technicians. A recent American study has estimated that between 1949 and 1967 the number of scientists and engineers who have received full-time training at institutes of higher education was about 1.3 million. Many others have been promoted to the rank of scientist and engineer, but did not receive full-time higher education. In 1963, it was estimated that the total stock of scientific and technical manpower was in excess of 2.4 million.

This manpower has been deployed in numerous ways to meet China's present and future needs. Some scientists and engineers do research, but the majority are employed in design and production work. The research is usually oriented closely with production needs, although many of the research institutes of the Chinese Academy of Sciences carry out some basic research.

Although many foreign scientists have visited China, especially in the period 1964 to 1966, very few, if any, have visited China in the past 18 months. But many of the earlier visitors published their impressions, and it has been possible to assess the status of science as it appeared to be in China at the start of the Cultural Revolution. Since the Cultural Revolution not only has the number of visitors to China been curtailed, but the flow of scientific publications has also completely dried up. No Chinese scientific journals have been received in Britain since October 1966. In fact, the number of publications listed for internal subscription in China fell from 650 in 1966 to 58 in 1968. Under these circumstances it becomes extremely difficult to make any objective assessment of the role of science in China today. The following comments are based entirely on reports appearing in the Chinese newspapers, and popular (not scientific) magazines.

When the Central Committee of the Communist Party laid down the ground-rules of the Cultural Revolution on August 8, 1966, a special item was inserted about the policy towards scientists and technologists. This stated: "Item 12. Policy towards scientists, technologists, and ordinary members of working staffs. As regards scientists, technologists, and ordinary members of working staffs, as long as they are patriotic, work energetically, and are not against the party and socialism, and maintain no illicit relations with any foreign country, we should in the present moment continue to apply the policy 'unity, criticism, unity'. Special care should be taken

of those scientists and technical personnel who have made [illegible] transform their world outlook and style of work".

National Importance

Several points are of interest about this statement. First, the fact that a special ruling was necessary for scientists and technologists suggests that by 1966, many of them still did not accept the ideas of Mao Tse-tung. Second, the statement confirms the national importance which the Chinese Government gives to scientific work. Third, the reference to illicit contact with foreign countries is puzzling, but suggests that all communications between Chinese and foreign scientists should be funnelled through official channels.

Reports published in the *People's Daily* make it appear doubtful that the policy announced in item 12 has been upheld. In July 1966, a month before the communiqué was issued, a special rally was held in Peking for those revolutionary scientific workers who were suffering from the "white terror", which was being imposed upon the research institutes of the Chinese Academy of Sciences by the supporters of Liu Shao-chi. There were several attempts during the ensuing months to seize power from the pro-Liu group who seem to have been in control of most of the institutes.

One article described how 20,000 revolutionaries, who supported Mao Tse-tung, and who were from the 50 or so units of the Chinese Academy of Sciences in Peking, tried to oust the leaders in the Academy who supported Liu Shao-chi. In the process the pro-Mao faction split into rival groups and for 20 days "civil war" waged between the two pro-Mao groups. The article spoke of "beatings, smashings, searchings and arrests". The "civil war" was stopped, but disagreement among the rebel groups continued.

Trouble was also reported in other research institutes at about the same time. In Tsinan, at the Chinese Academy of Sciences' Oceanographic Institute, the *People's Daily* reported an outbreak of fighting. Here, the supporters of Liu Shao-chi took the initiative and hit and persecuted many of the pro-Mao cadres and labelled them with different political terms. Eventually the tables were turned and the pro-Mao faction seized power.

The main crimes of Liu Shao-chi and his supporters were announced at another large rally held in Peking on April 10, 1967. On that occasion representatives of the Revolutionary Rebels United General Headquarters of the Chinese Academy of Sciences accused the Academy supporters of Liu Shao-chi of the following policies:

- They had promoted research which was aimed at restoring what was ancient and worshipping what was foreign.
- They advocated research that was theoretical and divorced from the needs of the country.
- They supported the award of academic degrees and scholastic titles, such as 'professor'.
- They called for high salaries for scientists and special awards for those who had made special contributions.

On July 30, 1967, a grand rally of all the proletarian revolutionaries of the Chinese Academy of Sciences was held in the Great Hall of the People in Peking. The rally marked the seizure of power from the Liu Shao-chi supporters and the formation of a Revolutionary Committee, which was to be the organ of power in the Academy. Two things are of great significance about the constitution of this committee. First, representatives of the People's Liberation Army are included, and thus the military are in a position to exercise some control over civil science. Second, two of the members are Chu Ko-chen and Wu Yu-hsun. These two have been Vice-Presidents [illegible] Mo-jo, the President of the Academy, have all maintained their former positions of leadership despite the reported upheavals.

been done to science during the Cultural Revolution. Some projects which had been shelved by the supporters of Liu Shao-chi have been [illegible] authority. For example, a new large radio telescope was recently completed. This was begun in 1958, but was stopped when the pro-Liu group gained control in the period around 1960-61. It has now been rushed for completion in time for the period of intense solar activity in 1968.

Notable Achievement

Another notable achievement of the Academy in recent months has been the major scientific expedition to Mount Everest (Mount Jolmo-Lungma). One hundred scientists from 30 scientific disciplines took part in a comprehensive survey covering a large area. It is perhaps significant that both of these widely reported events fall into the area of responsibilities held by Vice-Presidents Chu Ko-chen and Wu Yu-hsun. Other accomplishments of the Research Institutes of the Chinese Academy of Sciences which have recently been reported in Chinese newspapers include the discovery of a new fossil skull cap of "Peking Man" at Choukoutien, and the construction of a new all-purpose transistorised digital computer.

Others reports in the Chinese press have suggested that major differences in policy exist among the Chinese leaders about how China should use her scientific and technical resources to meet her national goals. These differences are partly a question of differences of opinion about what the goals should be, and partly a question of the priorities and strategy to be followed in reaching the goals.

The disputes are usually polarised into two extreme views — one which is assumed right and is ascribed to Mao Tse-tung, and one which is assumed wrong, and is ascribed to Liu Shao-chi. The disputes cover a wide spectrum of scientific and technological policies, everything from military research, and agricultural mechanisation, to policies for education. The disputes over educational policies have been particularly intense. All schools and universities were closed at the start of the Cultural Revolution in July 1966. Some re-opened a year later, but judging from the continuing exhortations in the Chinese press for students to return to class, it would seem that not all schools are yet back to normal.

The new educational policies now being promulgated are bound to have a major impact on China's scientific and technological manpower programme and hence on the part science will play in China's future. All education is to be shortened. Tung-chi University in Shanghai, for example, is to have its courses reduced from four to three years. In addition, all curricula are to be revised, and the subjects taught are to be geared much closer to production requirements. Political ideology is to play an even bigger part in the promotion from one educational level to the next, and both teaching and examination methods are to be changed. All of this is bound to affect the quality of the new scientists and technologists and impose constraints on the type of scientific activity which will be feasible in China's immediate future.

If it is difficult to assess the rôle of science in China's present, it is well nigh impossible to predict the rôle of science in China's future. The way in which science and technology contribute to — and indeed modify — national goals, depends upon the socio-economic environment. What this environment will be after the death of Mao Tse-tung is impossible to foretell. The specific ways in which science and technology will be used will depend of course a great deal on the outcome of the Cultural Revolution.

New World

In China, the new "world view" implied by science was first appreciated by the intellectuals at the time of the great debates on science in the 1920's. The present Government has understood the need to spread this world view among the 700 million Chinese in all walks of life. It is an im-

portant component in their efforts to achieve a modern economy. [illegible] tremendous efforts have been invested in trying to bring about a scientific revolution at the grassroots level. How successful the campaign has been is difficult to say. But as long as Mao Tse-tung and his supporters are in control great emphasis will continue to be placed on this aspect. For not only does Mao appreciate the social implications of his campaign, but he also appreciates that if the peasants and workers are encouraged to innovate scientifically themselves, then production will also increase. In this way, progress will also be made to the attainment of economic growth.

If Liu Shao-chi and his supporters finally gain control, then it is likely that less attention will be paid to bringing the scientific revolution to the peasants, and more attention to carrying out advanced scientific research. One result of the Cultural Revolution has been an apparent change in priorities — with more of China's scientists switched to working on projects of immediate relevance to China's development needs. This will be a loss to world science and the freedom of some of China's scientists, but overall it may be a gain for China's development.

In the immediate future it is unlikely that China will make many new contributions to basic science. But as she develops economically, as her political cadres become more technically competent, i.e. become both "red and expert", then I believe that once more it will become a policy to excel in basic science. Bearing in mind that by the year 2000, China's population will be about 1,300 million, and that the majority of these will have received some education in science — then the manpower resource base for recruiting research talent must be recognised as enormous. China's contributions to basic science in the twenty-first century could then be extremely significant.

NEW STATESMAN
18 October 1968

Mao's Second Take-over

RODERICK MacFARQUHAR

At the celebrations of the 19th anniversary of the Chinese communist revolution this month, Mao could congratulate himself on a second take-over of the country. Ever since the start of the cultural revolution, one of his main objectives has been to destroy the power of the party bureaucracy, which he felt was suppressing the revolutionary vigour of the masses. This meant more than just the elimination of top people like Head of State Liu Shao-ch'i, whose loss of party posts was announced this week. It meant winkling out tough, experienced, well-entrenched officials in the provinces as well as the centre. In their place he decreed the organisation of Revolutionary Committees composed of soldiers, some reformed party members, and the more dynamic Maoists thrown up in the turmoil of the cultural revolution.

The process started at the end of January 1967 in a frontier province in the north-east; it was completed last month in Tibet and Sinkiang, in the remote west and north-west. In between there has been much bloodshed, and there is plenty of evidence that even the formation of a Revolutionary Committee does not signal its end. But the take-over itself was a considerable achievement. And with Sinkiang and Tibet in the bag, Maoists [illegible] mainland was now all-red.

Much of the credit for the Maoist take-over goes to the generals. Mao has found it necessary to purge several top soldiers during the cultural revolution, but sufficient have remained loyal for him to be able to brandish the ultimate sanction of military force in his struggle with the party apparatus. The result has been that military men head the Revolutionary Committees in 19 out of China's 26 provinces, but while their loyalty may be reliable, Mao cannot afford to let the army get too firm a grip if he expects to restore civilian control. However, he will have to lean on the generals until he completes the long process of rebuilding the Communist Party – to a large extent recruiting it from scratch – now getting under way in the provinces. At the centre, Mao has already put together a new 14-man leadership group which formally outranks the old Politburo. Significantly this group contains eight 'cultural revolutionaries', including Mao and heir-apparent Lin Piao and their respective wives, but only three generals on active service and one full-time government official, Premier Chou En-lai. (The two others are security chiefs, one probably the head of Mao's bodyguard; [illegible] in the group.)

When the Communist Party has been rebuilt, Mao may set it the task of taking

over power in the army from the generals just as today he is sending worker teams to take over power in the universities from the Red Guards (NS, 23 August). This latter operation may well be causing widespread depression among young intellectuals who thought they had distinguished themselves in the Maoist cause, for intellectuals are being denounced as counter-revolutionaries who are sowing dissension in the universities with such remarks as: 'We are all rotten intellectuals and are subject to being discarded'. There is a strong current of anti-intellectualism around. When Shanghai intellectuals objected to worker teams assuming control of the theatre, a local newspaper retorted:

> They said that the workers were ignorant of the works of Stanislavsky. Perfectly right, my dear sirs, we of the working class truly have no interest in those things of feudalism, capitalism and revisionism. Not only do we have no interest but we are also determined to overthrow and discredit them. What is so good about Stanislavsky anyway? His works are only out-and-out bourgeois rubbish.

The first objective of the worker teams is to wrest control of the universities, schools and other parts of the 'superstructure' from the intellectuals. Their second and more far-reaching purpose is to use that control to organise a completely egalitarian system of education in which working-class children will not be handicapped because their parents do not help them with their homework but instead require their help in the fields. Exams seem to be on the way out and an article in the latest issue of *Red Flag* attacks the old system for 'recognising marks only but not persons, still less the social classes people belong to'.

Here committees for educational revolution, consisting of poorer peasants, teachers and students have taken over from the school principals. The committees reduced primary schooling by one year and secondary schooling by two, making a total schooling period of nine years. On finishing school at 15 or 16, children will be expected to spend a few years doing farm work before being selected for university on the basis of political as well as intellectual qualifications. When students get to universities they will almost certainly find the courses there shortened too. One Shanghai university specialising in architecture and civil engineering has already cut the length of its courses from five to three years.

Perhaps the most convincing indication of Mao's determination that all intellectuals must be proletarianised is that even Chinese atomic and rocket scientists have now been attacked along with Nieh Jung-chen, the top party man charged with master-minding the nuclear weapons programme. 'Capitalist-roaders' have been exposed at the Tachaitan rocket plant in remote Chinghai, while a Red Guard bulletin has stated that the director and a deputy director of the Institute of Atomic Energy and the director of the Institute of Mathematics have been arrested along with two prominent administrators at the Academy of Sciences. For these as for all other intellectuals schooled under the old system, the prescription is re-education. The method is a familiar Maoist one and already tens of thousands have left classrooms and desk jobs to settle down as manual labourers in the countryside.

Look, Hong Kong
16 November 1968
No. 163

Can Workers Lead the Intellectuals?

by Chi Ming

Lenin said: "Communism equals the Soviet Union plus national electrification." This was an expression that never ruled out the people's desire for happy life in a socialist or Communist society. However, anyone on the Chinese mainland enjoying a comfortable life or desiring to live better will be accused of following the influence of "capitalism," "revisionism" and "capitalist restoration," and be purged.

In Lenin's time, the desire for "electrification" was a progressive slogan, but, with regard to the present situation, such a slogan is outdated, because with the exception of the Chinese mainland and a few other places "electrification" has become reality. In Hong Kong, for instance, the average middle class family now has in its possession an electric phonograph, refrigerator, television, electric fan, electric rice cooker, electric iron and electric washing machine. Thus, if Mao Tse-tung sincerely tries to improve the livelihood of the 700 million Chinese, he should try to follow Lenin's instruction by bringing all the blessings of electrification to the Chinese people on the whole mainland.

When China goes for "electrification" or "modernization," she must have a great army of scientific and technical forces to embark on different projects with the full support of the common people; they may thus concentrate their efforts in inventing and discovering wonders for mankind. The question remains : how to build up such a great scientific and technical force, and how to fully develop its creative spirit during the course of its cultivation. Evidently this isn't the kind of problem that can be solved through political campaigns or "Mao Tse-tung's thought" or the like.

While it is true that the Chinese Communists have in the nineteen years of their rule turned out certain numbers of scientific and technical personnel, the various political campaigns have to varying extents affected their creative spirit. For instance, in 1956 Chien Wei-chang was awarded a second-class medal for his research paper on dynamics entitled "On the Question of the Large Deflection of Circular Thin Elastic Plate," but he was later branded a "rightist" and has since done nothing useful in his field of studies; no one can say that his loss in creative thinking does not represent a waste of talent for the country as a whole.

In terms of China's population and territory, the scientific and technical personnel currently available is far from enough to cope with the need for national construction. Liu Shao-chi aptly said: "All our Party and League members and revolutionary intellectuals should study hard and earnestly pursue their professional knowledge, and master well all kinds of technology and scientific learning." This was a sharp comment on the ignorance of those "empty-headed politicians" who never realized the importance of professional and technical knowledge to the performance of duties. Is it for the benefit of the country and people that we should have more empty-headed politicians or well trained personnel thoroughly

imbued with professional knowledge? Personally I believe we should have more of the latter. In the past, when the Chinese Communists were preoccupied with political and military struggles, naturally they needed more political and military specialists to speed up their success in the seizure of political and military power. Once in power, they should concentrate their efforts in building up the country. They do have such personnel who understood quite well what type of persons they need in national construction. Chang Ching-fu in an article published in "Chung Kuo Ching Nien Pao" (China Youth Journal) on February 25, 1958 said: "... professional and technical knowledge serves as the tool and weapon for accomplishing all kinds of tasks; advanced science and technology serves as an advanced tool and weapon; it would be difficult to try to accomplish all tasks without thoroughly acquainting the personnel with professional knowledge and scientific technology. Our tasks in industrial construction, in agricultural development, in financial, trade, communications, legal and cultural fields are political tasks for the 600 million Chinese people, we should rely on the entire body of people for their accomplishment. But every task involves certain professional and technical problems, and without a great army of specialists possessing sufficient professional and technical knowledge we shall find it very difficult to accomplish the tasks faster, better and more economically."

Although Chang Ching-fu mentioned in the above paragraph the term "political task," the meaning of the term differed greatly from "empty-headed politician" and political campaigns; what he said completely corresponded with Lenin's "Communism equals the Soviet Union plus national electrification." Without advanced scientists and technical experts and complete facilities, it would be impossible to accomplish the nation's construction by merely inciting the revolutionary fervor of the people; this was illustrated by the disastrous failure of the "steel making" campaign during the Great Leap Forward in 1958.

There had circulated on the Chinese mainland a prejudice that no one should study anything which was first invented in a capitalist country. In his article published in People's Daily on June 13, 1956, Lu Ting-yi (purged former Director of Propaganda of the CCP Central Committee) criticized such an erroneous trend. Under the title "Hundred Flowers Bloom and Hundred Schools of Thought Contend," the article pointed out: "It is wrong to fix a label of 'feudalism,' 'capitalism' and 'socialism' on a certain medical, biological or other natural science theory by calling the Chinese medicine practitioner 'feudalistic,' and the Western medicine practitioner 'capitalistic,' Pavlov's theory 'socialistic,' Michurin's theory 'socialistic,' and Mendel's study of heredity 'capitalistic' and so forth." There should not be any class attributes connected with the study of medical and natural sciences and theories, so that Einstein's theory is not only adopted by capitalist countries but also by Communist countries; Michurin's theory should be treated in a similar manner.

The question that really concerns us is whether one can master this or that kind of science and technology and whether such science and

technology can be properly applied. For instance, atomic energy can be used to develop industry and other peaceful projects, the same thing can be made to kill more people and make war more horrible. However, science and scientists are innocent, if certain sciences and scientists commit their studies to criminal purposes, for the most part their rulers or systems should bear the blame.

As mentioned earlier, the intellectuals and scientists should be protected during the course of building up the new China, because a new crop of intellectuals and scientists cannot be raised without relying on the older and experienced ones. An editorial in "Chung Kuo Ching Nien Pao" on April 9, 1963 said: "Veteran scientists are the treasures of our country; they are needed to play the leading role in developing science and technology, and they are of special importance in the training of talents." This truly sounded fair to the veteran scientists. But, when the power struggle was launched under the cover of the "Great Cultural Revolution," many specialists and scientists of outstanding abilities like statistician Hsieh Mu-chiang were all given harsh treatment; some were arrested, others were mercilessly attacked. Such an action inevitably hinders the progress of our national construction to a very serious extent.

In recent years, Canada has gone all out to recruit and employ technical personnel from all over the world in order to speed up her national construction program; thus by comparison Canada attaches greater importance to scientific and technical experts than the Communist regime in Peking. Meanwhile, if the influence of "conservatism" and "capitalism" continues to prevail over scientific and technical circles on the Chinese mainland, the Communist authorities should look squarely into the issue and try to find out what has been wrong with their system and what has caused the Chinese scientists and technical personnel to become passive. Einstein never tried hard enough to make his brilliant achievement in physics benefit Germany largely because of the latter's discrimination against the German Jews and Hitler's wars of aggression.

A Chinese proverb says: "In study there is no difference in senior and junior, he who masters is the teacher." In other words, anyone who is thoroughly conversant with a certain subject or technique can be a teacher and leader in his particular field of learning. At present, the Chinese Communist propaganda goes all out to stress that the "working class" must exercise leadership in everything, the word "everything" naturally covers all activities in factories, mining centers, postal and telecommunications centers, banks, trade, culture, education, sciences and all concerned departments. The question is that can the workers lead in such activities? If the workers have mastered the necessary professional knowledge and technology, naturally they will know how to exercise leadership over these departments, and they cannot play the leading role if they haven't learned enough about the different subjects mentioned above.

Before 1957, many Party cadres who were totally ignorant of the necessary professional knowledge were assigned to leading posts in numerous

government and academic organizations; their presence had aroused widespread criticism which was wrapped up in the laconic sentence "The layman leads the expert."

On the other hand, the Chinese Communist cadres in those days were still open-minded enough to learn from the experts. Liang Szu-cheng, a well-known bridge construction expert, published in the 23rd issue of "Chung Kuo Ching Nien," 1957, an article which pointed out: "I frequently have contact with the leading comrades of the Urban Construction Department, Construction Engineering Department of the State Construction Commission, and many designing units; they all fought in guerrilla warfare in the past, often they would humbly call themselves 'boors from mountain caves.' In fact, they were all battle-tested and fighters who have learned never to bow to difficulties of any kind; they have, on the basis of Marxism-Leninism, learned from the Soviet experts, from veteran scientists, veteran engineers, and they are themselves 'experts' who have graduated from the 'university' of practical work ... there are many technical problems on which the engineers cannot reach a conclusion through repeated and sometimes heated debates, but after listening to opinions of both sides, these comrades are capable of drawing out conclusions. For instance, the decision on adopting the 'tube caisson foundation' method in building the Wuhan Yangtze River Bridge was reached in such a manner. How could such a correct conclusion be drawn by those without expert knowledge? Impossible!" Mr. Liang also said: "Besides, of higher learning. In Tsinghua University, for instance, there are several dozen directors, section chiefs and Party committee secretaries of industrial and mining setups who want to 'study from the very beginning.' They average 40 years old. Their curriculum is similar to that for college students. After graduation, they will all become engineers." The above paragraph quoted from Liang Sze-cheng's article clearly showed that the leading cadres must understand professional knowledge and concerned techniques.

I hold no prejudice against the working class. In fact, the workers occupy a very important position in the construction of different lines of production and business. However, it is undeniably true that the workers are, on the average, rather low in educational levels. In the long years of employment, they are only able to learn general techniques, and they must rely on the experts in large-scale and precision designings. For instance, the newly completed Yangtze River Bridge at Nanking could not have been built without help from the experts in those days; it was beyond the ability of the ordinary workers with general technical knowledge no matter how hard they might have tried to rely on Mao Tse-tung's thought.

Therefore, if the working class wants to exercise leadership in everything, the workers must acquire the necessary technical knowledge and ability. For instance, Nieh Jung-chen, head of the Scientific Commission under the Ministry of National Defense, and Wang Ping-chang, head of the Seventh Ministry of Machine-Building, have acquired the most essential knowledge needed although they are not as nearly accomplished as Chien Hsueh-sen and Chien San-chiang in science.

Besides, the current campaign to make the "working class exercise leadership in everything" is nothing more than a political task designed by the Mao-Lin clique to suppress the "Red Guards" and the intellectuals; Mao and Lin want the workers to discredit all the "authorities" to pave the way for restoring peace and order and to further bolster Mao's prestige as the supreme leader. Worker comrades, you have been fooled!

Sing Tau Man Pau, Hong Kong
19 September 1968

WHERE CAN A CHINESE SCIENTIST GO?

by Cha Ling, who received the personal experiences of Chinese physicist Li Ming-ching

There are more than 10,000 Chinese scientists living and working in Western nations. They all have this sentiment "living in a strange country, they feel sorry for themselves," and they all hope that someday they can return to the fatherland to live and to work. But under the present conditions, none of them are willing to return. As a whole, their attitude may be represented by the statement of a Chinese electronic expert, who escaped from the mainland in 1960 and has been living in London. He said: "In England, I had no relatives, but I felt that I was warmly welcomed. My contributions were appreciated and encouraged. I have many friends among the overseas Chinese, but I have begun to feel that my closest friends are those of the same profession from other countries."

How true! Scientists are not separated by national boundaries and scientists of mutual interests have warm and friendly feelings for each other and they are not affected by differences in nationalities. A Chinese medical doctor who is now living in West Germany said it well: "In China, the Communist Party first forced me to decide whether I was a medical doctor or a Chinese. Because I had studied abroad, they have their suspicions of me. They made things difficult for me; they insulted me; they relegated low-class work to me and would not allow me to undertake responsible work or work in which I could contribute the most to society. As a result, I had to come to the conclusion that the fatherland did not need me. Therefore, I gave up my Chinese citizenship and chose to be a doctor. Probably every nation in the world needs a doctor like me."

A more typical example

Dr. Li Ming-chiang, a physicist reknown for his technological liaison work at the research institute of the Virginia Technological Institute, had made a comparative study of Chinese Communist and Western scientists. Li Ming-chiang was born in 1935 in Ming-po, Chekiang Province, and although his family was not wealthy, the Chinese Communists placed his father and mother in the class of capitalists. For this reason, he had to struggle very hard to stay in school. In a school, aside from one's scholastic work, a student's standing in the class is based on his family origin and the student's so-called "political consciousness." For this reason, although he was excellent in scholastic work, he barely passed the other standards to get promoted every year. From 1953 to 1958, he studied physics theory at Peking University. After he was graduated, in spite of being the best student in his class, he was sent to a teacher's normal college in Inner Mongolia to teach elementary physics. Although the laboratory facilities of the school were pitiful and crude, he, because of his family origin, was not even allowed to enter the laboratory.

Finally, after being frustrated and bored with the whole matter, he eventually escaped from the mainland upon an invitation to go to the United States.

A scientist in a free heaven and on a free earth

At that time his English was rudimentary; moreover, when he took the school examination, someone discovered that his educational level was equivalent to a junior in an American college and that what he had learned in Peking University was at least 10 years behind times. At this he was annoyed and discouraged; at first, he couldn't believe that his standards were so low and he turned around and accused the Americans of discriminating and looking down on his scholastic capabilities. Because of discontentment, he tried harder; so hard that he slept little and ate little, but studied and studied. His teachers gladly gave him special attention and special help.

In 2 years, Li Ming-chiang obtained his doctorate in physics, a spectacular achievement. For this reason, the school decided to send him to the Princeton Institute for advanced study for further study. Only the most outstanding and experienced scientists were granted this honor. The scientists who go to the Princeton Institute for Advanced Studies stay there for 2 years and during that time receive high salaries, live in luxury apartments and have the use of all sorts of recreational facilities. It has one of the largest libraries in the world and for research tools it has almost everything available and if not, they are procured upon request. As to work, the scientists do nothing but use their heads to think of and to solve scientific problems. Li Ming-chiang fully utilized those 2 years there. When he left the institute, he received numerous offers and had the choice of picking the one which paid him the most and gave him the greatest satisfaction.

The reason that Chu talent was used in China

He is married to a Chinese girl who holds a doctorate in chemistry. They now have two lovable children and a comfortable and happy life. As to work, he uses one fourth of his time to teach the research students and spends the rest of the time for his own research work. His interest in politics remains as lukewarm as the day when he was on the China mainland. If the Chinese Communists were not so antiquated in demanding that in everything "politics commands" and had they not interfered with his livelihood and work, he and other outstanding physicists would not have gone to the United States and would have remained on the mainland to serve the Chinese Communists.

Speaking of the scientists on the mainland Li Ming-chiang pointed out that they should not be looked upon as one homogeneous group. For example, scientists who had studied abroad are generally older and most had studied in the Soviet Union, the Western nations, or Japan. Those who are relatively young acquired their education on the mainland and

they are also distinguished by their family origins, good or bad. The types of scientists also vary according to the changes of events, particularly during the drastic and terrific changes, in 1958, of the struggle against the rightists and, in 1966, when the great Cultural Revolution was initiated. Because of the changes of the nature of these problems, the fates of the scientists on the mainland is absolutely different from that of the scientists abroad.

A feeling of security and shortcuts

The great problem of the scientists on the mainland today is the lack of a sense of security. The Chinese Communist regime blows hot and cold towards them, praising them at one time and putting them down at another. After the anti-rightist struggle, the Chinese Communist Party accepted a large number of outstanding scientists into their party leaving them to believe they could have stability and peace in work; but this was completely shattered with the launching of the great Cultural Revolution. When the Chinese Communists practice suppression or "brain-washing," they often use the tactic of threat and seduction. On the one hand, they would select a few scientists and lavish praise and rewards upon them; on the other, they would single out another group of scientists and brand them as targets of struggle and hurl all sorts of invectives and insults upon them. These two groups of persons were all selected by the cadres, and the cadres made their selections quite at random. Those scientists who received adulation and rewards naturally felt that "their ancestors were looking at them and their family tombs were propitious;" scientists who were the targets of struggle were naturally disgruntled and discontented with no way to release their anger. Those scientists who neither received an award nor were the targets of "rectification" felt greatly relieved and consoled themselves that they were lucky to get away with it again. However, in this type of struggle, there is not just one obstacle, but many obstacles ahead. For this reason, all the scientists are still in great apprehension not knowing when it will be their turn to be struggled against. [Part I of this article]

Excerpt from China Mainland Media
Revealing Regime Treatment of Doctors
and Status of Medicine in China

June-Nov 1968

Medical facilities in China, already below international standard, have deteriorated during the Cultural Revolution. Doctors and nurses have been "dragged out" in large numbers and forced to do manual work in the hospitals. Other physicians have been sent to rural areas to act as "barefoot doctors," doing part manual and part medical work; in some instances they have been told that they will only receive work points for agricultural labor and not for medical work. Disruptions in the pharmaceutical industry and in transport facilities have made medicine scarce.

In trying to overcome shortages of both facilities and staff, the Chinese authorities are encouraging medical personnel to use Mao's Thought in place of drugs and equipment. But risks are apparently being taken in Mao's name. The New China News Agency (NCNA), on November 11, 1968, reported on the exploits of Cheng Yu-lu, a "barefoot doctor" who had never been to a medical college. A patient once went to the commune clinic where Cheng worked and asked for an operation for an abscess on the right upper abdomen:

> "A doctor at the clinic, who was a medical college graduate, told the patient: 'Your case is very serious. Our clinic is not equipped to treat you. We would like to recommend you to some other place for treatment.' At this, Cheng Yu-lu came up to examine the patient. The doctor was angry. He said: 'How can such a poorly equipped clinic treat such a disease? You will be held responsible if anything goes wrong.' Cheng Yu-lu ignored the doctor's complaints... He improvised an operating theatre in his bedroom...".

Lanchow Radio said on November 8 that the political department of the Kansu Provincial Revolutionary Committee recently called on the people to learn from "model health worker," Cheng Yu-lu, in being "boundlessly loyal to Chairman Mao."

Members of a Mao Tse-tung propaganda team of the People's Liberation Army (PLA) used new acupuncture techniques to treat deaf mutes at the Liao Yuan school for deaf mutes in Kirin according to NCNA on November 3. The three doctors and five nurses in the team tried an important acupuncture point which specialists in the past had called a "forbidden point":

> "The old acupunture books stipulated that the needle could be inserted safely only to a depth of one to 1.6 centimeters. But this did no good. The 'authorities' claimed that insertion to a depth of 3.3 centimeters would make a healthy person become mute; insertion to a depth of five centimeters would endanger life."

Medical worker Chao Pu-yu first tried the acupuncture needle on his own body, inserting the needle into his head beyond the danger point. Thus having satisfied the team that the treatment was safe, they began work on the children in the school. After acupuncture for half a month, 32 of the 157 deaf mutes could shout: "Long live Chairman Mao."

NCNA described on November 1, how a Shanghai medical team equipped a primitive hospital from scratch without any financial help from the State:

> "They borrowed some stools and boards to make some beds and fetched water from a well about half a kilometer away. The operating table was only a bed of wooden boards and child delivery was carried out in a bamboo reclining chair. A washbasin was used as a sterilizer. They did not spend a penny of State funds... The bourgeois reactionary academic 'authorities' looked down on the operating room of this tiny hospital as 'violating the regulations' and 'not to standard,' but it was in this operating room which had no operating table, no shadowless lamp, no blood bank, no oxygen and no running water that the comrades performed dozens of medium and major operations, including gastrectomy, cholecystectomy, hysterectomy, and appendectomy by kerosene lamp and flashlight."

An operation by PLA surgeons on a peasant woman with an abdominal tumor weighing 90 catties was reported by NCNA in June 1968. The operation was carried out with the aid of Mao's Thought despite the fact that the "army health center was not equipped for such a rare operation." Now the Chinese have opened an exhibition of PLA achievements in medicine in Peking with the tumor as the center piece.

Excerpts from China Mainland Media
Revealing Regime Treatment of Scientists

June-Nov 1968

Warning To China's Nuclear Scientists.

Chien San-chiang, Director of the Institute of Atomic Energy of the Chinese Academy of Sciences since 1958, has been denounced as a "capitalist-roader and secret enemy agent" who must be "toppled." (Canton Red Guard newspaper, Red Flag Bulletin No. I, June 1968.)

This attack on Chien, one of China's leading nuclear scientists who, although he studied and worked abroad between 1937 and 1948, has since held a number of political as well as scientific posts, reflects the changed official attitude towards scientists and technicians seen in Mao's recent instructions on technical training (Peking Radio, July 21) and in reports on the experiences of the Shanghai Lathe Plant in adopting new training procedures.

The emphasis in technical training is now to be on practical labor at ordinary factory or agricultural worker level as opposed to theoretical research which is said to divorce intellectual workers from the masses. Foreign influences and revisionist views such as those attributed to "China's Khrushchev" (Liu Shao-chi) are to be resisted.

The relevance of the latest instructions to scientists has been clearly underlined. On July 21, the People's Daily, commending an investigation report on the Shanghai Lathe Plant prepared by the New China News Agency and Wen Hui Pao, urged scientific research departments and "leading units" to read it carefully as a "sharp weapon for further criticizing and repudiating" Liu Shao-chi's "counterrevolutionary revisionist line in science and technology."

Wen Hui Pao warned on July 26 that the situation in scientific and technological circles was "not satisfactory," and complained that "some people" sought to put work first, indulged in personal ambition, relied too heavily on foreign textbooks and conventions, and did not move beyond the library or laboratory. They did not intend to follow the direction indicated "long since" by Mao for science and technology. The newspaper also complained that a "number of so-called experts, extremely politically reactionary and completely ignorant in their work," had "usurped leadership over science and technology."

And in research bureaus, the strata were "strictly defined" and the "newly emerging forces," (presumably the revolutionary workers), were suppressed. In short, the structure of scientific and technological departments had become a "hotbed for the breeding of revisionist intellectual aristocrats."

Wen Hui Pao warned on July 26 that some scientific and technological units had abandoned the task of "consolidating and expanding" revolutionary great alliances and three-way alliances. Instead of struggling against

"capitalist-roaders," they were divided by "civil wars." A Special Edition of Materials (published jointly by two Canton revolutionary groups and recording Chou En-lai's meeting on April 20-21, with representatives from the National Defense Scientific Commission, the Military Control Commission, the Seventh Ministry of Machine Building and the Chinese of Sciences), disclosed that the "violent struggle of the Seventh Ministry of Machine Building was connected with the factionalism of the Scientific Commission." Both these departments are thought to be concerned with China's nuclear program.

Wen Hui Pao laid down certain tasks for scientific and technological circles. They were to

> "combine revolutionary mass criticism and repudiation with the purification of the class ranks, with the task of struggle-criticism-transformation in individual units and with the rectification of the party organization, and carry mass criticism and repudiation through to the end."

This sterner attitude contrasts with that revealed in the 16-point decision of the Chinese Communist Party Central Committee on the Cultural Revolution, adopted on August 8, 1968, which laid down that during the cultural revolution,

> "the policy of unity-criticism-unity should be continued toward those scientists, technical personnel, and working people so long as they are patriotic and work actively without opposing the party and Socialism, and so long as they have no improper association with foreign countries. Those scientists and technical personnel who have made contributions would be protected. Assistance may be rendered in the gradual transformation of their world outlook and work methods." (NCNA, August 8, 1966)

"Red v. Expert" campaign continues.

Laboratories have also become a target of the new wave of the "Red versus Expert" battle now being waged in China. In 1963-65 during the period of recovery from the three previous years, necessity caused greater reliance on expertise, but currently the emphasis on the leading role of workers has given rise to a new prestige for "Redness." Consequently purchases of technical equipment and money spent on proper research facilities in 1963-64 are now being condemned as bourgeois and counterrevolutionary.

Eight workers at a silk weaving mill in Soochow, Kiangsu Province, who wrote a report on their investigations at the mill's laboratory (New China News Agency (NCNA) on October 31, 1968), said that since it was set up in 1963, the laboratory had been controlled by a "handful of capitalist-roaders and reactionary bourgeois technical authorities" who believed in "letting experts run the plant":

"These fellows were so free with money that they bought a good deal of apparatus blindly, regardless of whether it was needed or useful."

The workers also condemned the "appalling extent to which the laboratory placed itself above the masses," and concluded:

"The laboratory staff have gone down to do productive work on the shop floor where they are being reeducated by the workers."

The story of the laboratory at Chuchou Tientsin Locomotive and Rolling Stock Works was told by Changsha Radio (October 30). This laboratory was established in 1958 at which time it was quite simple and in regular touch with the workers. But in 1964, encouraged by official emphasis on "expertness," the "reactionary bourgeois technical authorities" spent 8,000 yuan on "a fine-looking laboratory" in the main building of the works and they also built a second laboratory.

"These persons also made a big thing of buying instruments, trying several of the same kind at one time."

The laboratory personnel were

"gravely divorced from production, sitting around in their laboratories and going in for so-called creation, invention, scientific research and theorising? They always reckoned themselves superior to the workers."

The report ended:

"The laboratory staff must take it in turns to do production and steel workers must take it in turn to work in the laboratory."